



## NASA's Earth-observing Missions

To study the Earth as a whole system and understand how it is changing, NASA develops and supports a large number of Earth-observing missions. These missions provide Earth science researchers the necessary data to address key questions about global climate change.

# NASA's Earth-observing Missions

### Characterize

How is the global Earth system changing?

### Understand

What are the sources of change in the Earth system and their magnitudes and trends?

### Predict

How will the Earth system change in the future?

### Apply

How can Earth system science improve mitigation of and adaption to global change?

### Operating Missions

Operating missions are those missions that are currently active and providing science data to researchers. Operating missions may be in their primary operational phase or in an extended operational phase. Currently NASA operates sixteen Earth-observing satellite missions, as well as a number of flight (i.e., airborne) missions, that provide long-term global observations of the land surface, biosphere, solid Earth, atmosphere, and oceans. Data from these missions enables an improved understanding of the Earth as an integrated system.

### Future Missions

Missions begin with a study phase during which the key science objectives of the mission are identified, and designs for spacecraft and instruments are analyzed. Following a successful study phase, missions enter a development phase whereby all aspects of the mission are developed and tested to insure it meets the mission objectives.

### Data

To access and download Earth-observing satellite data, visit NASA's Earth Observing System Data and Information System at [earthdata.nasa.gov](http://earthdata.nasa.gov).

